

What Is Claimed Is:

1. A conveyor suitable for conveying objects along a transport direction, the conveyor comprising:

a plurality of connected links, each link having a length extending across the direction of transport and a width extending along the direction of transport, each link having a body, a cam follower member, at least two opposed gripping members, and a gear drive mechanism interconnecting the cam follower member and the gripping members, the cam follower member being movable to selectively move the gripping members between a first position and a second position via the gear drive mechanism, the gripping members when in first position being disposed in an open position, and the gripping members when in the second position being disposed in a gripping position for contacting one of the objects to hold the object during transport.
2. The conveyor of claim 1, wherein the cam follower member is a slider slidable along the length of the body, and wherein the gear drive mechanism is a double rack and pinion arrangement with two pinion portions and two rack portions, each of the pinion portions being located on a respective one of the gripping members and both of the rack portions being located on the slider, each pinion portion operatively interconnected with a given one of the rack portions.
3. The conveyor of claim 2, wherein each of the links includes a spring member for urging the slider in a direction so as to move the gripping members toward the second position.
4. The conveyor of claim 2, wherein each of the two rack portions on the slider are disposed on opposite sides of the slider so that the corresponding pinion portions rotate in opposite directions as the slider slides.

5. The conveyor of claim 1, wherein each link includes a conveying surface, and the cam follower member is disposed so as to be spaced from the conveying surface.
6. The conveyor of claim 1, wherein the gear drive mechanism is a double rack and pinion arrangement with one pinion portion and two rack portions, each link including two sliders slideable along the length of the body, cam follower member extending from one of the sliders, each rack portion being located on a given slider, and the pinion portion being rotationally mounted to the body operatively interconnected with the rack portions and rotatable via the cam follower member.
7. The conveyor of claim 6, wherein each link includes at least one spring member for urging the sliders in a direction so as to move the gripping members toward the second position.
8. The conveyor of claim 6, wherein the pinion rotates around an axis perpendicular to the transport direction.
9. The conveyor of claim 1, wherein the gripping members include an adapter for contacting the object.
10. The conveyor of claim 9, wherein the second position is self-adjustable depending on the size of the object.
11. The conveyor of claim 1, wherein each gripping member pivots relative to its respective link when moving from the first position to the second position.
12. The conveyor of claim 11, wherein each gripping member pivots about an axis substantially parallel to the direction of transport when moving from the first position to the second position.

13. The conveyor of claim 1, wherein each link includes a spring member for urging the gripping members toward one of the first or second positions.

14. The conveyor of claim 1, wherein each link includes a releasable holding member for holding the gripping members in the second position.

15. The conveyor of claim 14, wherein the releasable holding member is a spring-loaded ratchet configured to hold the cam follower member in a given position so that the gripping members are in the second position.

16. The conveyor of claim 14, wherein each link includes a movable release member for releasing the releasable holding member.

17. The conveyor of claim 16, wherein the movable release member is slidable along the link and includes a cam follower portion for actuation.

18. The conveyor of claim 14, wherein the cam follower member includes a first cam follower and a second cam follower, the first cam follower being contactable to move the gripping members toward the first position when the releasable holding member is released, and the second cam follower being contactable to move the gripping members toward the second position.

19. The conveyor of claim 14, further including at least one guide for contacting at least one gripping member of each link to urge the gripping member toward the second position to thereby more tightly grip the conveyed object.

20. The conveyor of claim 1, wherein the conveyor is configured so that conveyed objects can be removed from the gripping members when the gripping members are in the second gripping position.

21. The conveyor of claim 1, wherein each link includes two sliders slidable along the length of the link, and each gripping member includes an arm attached to a bottom portion of a respective slider.

22. The conveyor of claim 1, wherein the cam follower member contacts a cam to thereby urge the gripper toward one of the first or second positions.

23. The conveyor of claim 1, wherein the link body defines a conveying surface, and the gripping members are configured to grip the object so that the object is spaced from the conveying surface.

24. The conveyor of claim 23, wherein the gripping members are configured to grip and convey an object in an inverted position with the object located substantially below the links.

25. The conveyor of claim 23, wherein the gripping members are configured to grip a container neck.

26. The conveyor of claim 1, wherein each gripping member slides relative to its respective link when moving from the first position to the second position.

27. The conveyor of claim 1, wherein the gripping members each have a gripping arm laterally offset from the gear drive mechanism in the direction of transport.

28. A link for a conveyor suitable for conveying objects along a transport direction, the link comprising:

a body having a length extending across the direction of transport and a width extending along the direction of transport, a cam follower member, at least two opposed gripping members, and a gear drive mechanism interconnecting the cam follower member and the gripping members, the cam follower member being movable to selectively move the gripping members between a first position and a second position via the gear drive mechanism, the gripping

members when in first position being disposed in an open position, and the gripping members when in the second position being disposed in a gripping position for contacting one of the objects to hold the object during transport.

29. The link of claim 28, wherein the cam follower member is a slider slidable along the length of the body, and wherein the gear drive mechanism is a double rack and pinion arrangement with two pinion portions and two rack portions, each of the pinion portions being located on a respective one of the gripping members and both of the rack portions being located on the slider, each pinion portion operatively interconnected with a given one of the rack portions.

30. The link of claim 29, wherein the link includes a spring member for urging the slider in a direction so as to move the gripping members toward the second position.

31. The link of claim 29, wherein each of the two rack portions on the slider are disposed on opposite sides of the slider so that the corresponding pinion portions rotate in opposite directions as the slider slides.

32. The link of claim 28, wherein the link includes a conveying surface, and the cam follower member is disposed so as to be spaced from the conveying surface.

33. The link of claim 28, wherein the gear drive mechanism is a double rack and pinion arrangement with one pinion portion and two rack portions, the link further including two sliders slidable along the length of the body, the cam follower member extending from one of the sliders, each rack portion being located on a given slider, and the pinion portion being rotationally mounted to the body operatively interconnected with the rack portions and rotatable via the cam follower member.

34. The link of claim 33, wherein the link includes at least one spring member for urging the sliders in a direction so as to move the gripping members toward the second position.

35. The link of claim 33, wherein the pinion rotates around an axis perpendicular to the transport direction.

36. The link of claim 28, wherein the gripping members include an adapter for contacting the object.

37. The link of claim 28, wherein the link includes a releasable holding member for holding the gripping members in the second position.

38. The link of claim 37, wherein the releasable holding member is a spring-loaded ratchet configured to hold the cam follower member in a given position.

39. The link of claim 37, wherein each link includes a movable release member for releasing the releasable holding member.

40. The link of claim 39, wherein the movable release member is slidable along the link and includes a cam follower portion for actuation.

41. The link of claim 37, wherein the cam follower member includes a first cam follower and a second cam follower, the first cam follower being contactable to move the gripping members toward the first position when the releasable holding member is released, and the second cam follower being contactable to move the gripping members toward the second position.

42. The link of claim 37, wherein at least one gripping member is configured to be contacted by a guide to urge the gripping member toward the second position to thereby more tightly grip the conveyed object.

43. The link of claim 28, wherein the gripping members each have a gripping arm laterally offset from the gear drive mechanism in the direction of transport.

44. The link of claim 28, wherein the link includes two sliders slidable along the length of the link, and each gripping member includes an arm attached to a bottom portion of a respective slider.

45. A link for a conveyor suitable for conveying objects along a transport direction, the link comprising:

a body having a length extending across the direction of transport and a width extending along the direction of transport, a cam follower member, at least two opposed gripping members, a spring member, and a gear drive mechanism interconnecting the cam follower member and the gripping members, the cam follower member being movable to selectively move the gripping members between a first position and a second position via the gear drive mechanism, the gripping members when in first position being disposed in an open position, and the gripping members when in the second position being disposed in a gripping position for contacting one of the objects to hold the object during transport, the cam follower member being a slider slidable along the length of the body, the gear drive mechanism being a double rack and pinion arrangement with two pinion portions and two rack portions, each of the pinion portions being located on a respective one of the gripping members and the rack portions being located on opposite sides of the slider, each pinion portion operatively interconnected with a given one of the rack portions so that the corresponding pinion portions rotate in opposite directions as the slider slides, the spring member urging the slider in a direction so as to move the gripping members toward the second position.

46. The link of claim 45, wherein the gripping members include an adapter for contacting the object.

47. The link of claim 45, wherein the link includes a releasable holding member for holding the gripping members in the second position.

48. A link for a conveyor suitable for conveying objects along a transport direction, the link comprising:

a body having a length extending across the direction of transport and a width extending along the direction of transport, a cam follower member, at least two opposed gripping members, at least one spring member, and a gear drive mechanism interconnecting the cam follower member and the gripping members, the cam follower member being movable to selectively move the gripping members between a first position and a second position via the gear drive mechanism, the gripping members when in first position being disposed in an open position, and the gripping members when in the second position being disposed in a gripping position for contacting one of the objects to hold the object during transport, the gear drive mechanism being a double rack and pinion arrangement with one pinion portion that rotates around an axis perpendicular to the transport direction and two rack portions, the link including two sliders slidable along the length of the body, the cam follower member extending from one of the sliders, each rack portion being located on a given slider, and the pinion portion being rotationally mounted to the body operatively interconnected with the rack portions and rotatable via the cam follower member, the spring member urging the sliders in a direction so as to move the gripping members toward the second position.

49. The link of claim 48, wherein the gripping members include an adapter for contacting the object.

50. The link of claim 48, wherein the link includes a releasable holding member for holding the gripping members in the second position.

51. The link of claim 48, wherein each gripping member includes an arm attached to a bottom portion of a respective slider.

52. A link for a conveyor suitable for conveying objects along a transport direction, the link comprising:

a body having a length extending across the direction of transport and a width extending along the direction of transport, a cam follower member, and at least one movable gripping member, the cam follower member being movable to selectively move the gripping member between a first position and a second position, the gripping member when in first position being disposed in an open position, and the gripping member when in the second position being disposed in a gripping position for contacting one of the objects to hold the object during transport, each link including a spring-loaded ratchet for holding the gripping member in the second position.

53. The link of claim 52, wherein the link includes a conveying surface, and the cam follower member is disposed so as to be spaced from the conveying surface.

54. The link of claim 52, wherein the gripping member includes an adapter for contacting the object.

55. The link of claim 52, wherein the second position is self-adjustable depending on the size of the object.

56. The link of claim 52, wherein the gripping member pivots relative to its respective link when moving from the first position to the second position.

57. The link of claim 52, wherein the gripping member has a gripping arm laterally offset from the gear drive mechanism in the direction of transport.

58. The link of claim 52, wherein the gripping member slides relative to its respective link when moving from the first position to the second position.

59. The link of claim 52, wherein the link includes at least two of the gripping members movable toward each other when moving to the second position.

60. The link of claim 52, wherein the spring-loaded ratchet is configured to hold the cam follower member in a given position so that the gripping members are in the second position.

61. The link of claim 52, further including a movable release member for releasing the releasable holding member.

62. The link of claim 61, wherein the movable release member is slidable along the link and includes a cam follower portion for actuation.

63. The link of claim 52, wherein the cam follower member includes a first cam follower and a second cam follower, the first cam follower being contactable to move the gripping members toward the first position when the releasable holding member is released, and the second cam follower being contactable to move the gripping members toward the second position.

64. The link of claim 61, wherein at least one gripping member is configured to be contacted by a guide to urge the gripping member toward the second position to thereby more tightly grip the conveyed object.